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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/811,558  | 03/29/2004  | Geun-soo Lee         | 29925/39912         | 1407             |
| 4743  | 7590        | 12/29/2005           | EXAMINER            |                  |
| MARSHALL, GERSTEIN & BORUN LLP<br>233 S. WACKER DRIVE, SUITE 6300<br>SEARS TOWER<br>CHICAGO, IL 60606 |             |                      | LEE, SIN J          |                  |
|   |             | ART UNIT             |                     | PAPER NUMBER     |
|   |             | 1752                 |                     |                  |

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/811,558             | LEE ET AL.          |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Sin J. Lee             | 1752                |  |

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 September 2005.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1-6 is/are allowed.
- 6) Claim(s) 7-12 is/are rejected.
- 7) Claim(s) 13-16 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. In view of the terminal disclaimer filed on September 30, 2005, previous double patenting rejection on claims 1 and 2 over App. No. '568 and previous double patenting rejection on claims 1-17 over App. No. '076 are hereby withdrawn.
2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 7, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al (US 6,590,137 B2).

Mitchell teaches (claim 1) a multicomponent superabsorbent particle comprising at least one basic water-absorbing resin in contact with at least one acidic water-absorbing resin. As one the examples for the acidic water-absorbing resin, Mitchell

teaches (claim 19) a *polyvinylphosphonic acid*. Mitchell also teaches (col.17, lines 21-28, lines 36-40) multicomponent superabsorbent particles having microdomains of the acidic resin and the basic resin dispersed in a continuous phase of a matrix resin, and as one of examples for the matrix resin, Mitchell teaches *polyvinyl alcohol*. Based on Mitchell's teaching, it would have been obvious to one skilled in the art to form multicomponent superabsorbent particles having microdomains of polyvinylphosphonic acid (as the acidic water-absorbing resin) and the basic water-absorbing resin dispersed in a continuous phase of polyvinyl alcohol (as a matrix resin) with a reasonable expectation of obtaining superabsorbent particles that exhibit exceptional water absorption. Also, Mitchell teaches polyvinylamine as one of examples for his basic resin (claim 15). Therefore, Mitchell's teaching would render obvious present inventions of claims 7, 11, and 12 (it is the Examiner's position that Mitchell's particles comprising polyvinylphosphonic acid and polyvinyl alcohol would inherently be capable of being used as an organic anti-reflective coating composition).

5. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mougin (6,159,457).

In claim 2, Mougin teaches the following:

2. A method for coating keratinous substances, said method comprising:  
coating said keratinous substance with a cosmetic or dermatological composition comprising an aqueous solution or an aqueous dispersion containing:  
(a) at least one non-crosslinked polymer capable of forming, after drying, a deposit or a film on said keratinous substances, said polymer exhibiting a critical temperature  $T_c$  for solubility in water of the LCST or UCST type ranging from  $0^\circ$  to  $100^\circ$  C.; and  
(b) at least one surfactant and/or at least one hydrophilic polymer, said at least one surfactant and said at least one hydrophilic polymer not exhibiting a critical temperature  $T_c$  of the LCST or UCST type ranging from  $0^\circ$  to  $100^\circ$  C.,  
wherein said at least one surfactant and/or said at least one hydrophilic polymer is capable of establishing a physical interaction with said at least one non-crosslinked polymer.

As example for the "at least one hydrophilic polymer", Mougin includes polyvinyl alcohol and polyvinylphosphonic acid polymer (see col.5, lines 13-35). Since Mougin teaches that there can be at least one hydrophilic polymer, it would have been obvious to one skilled in the art to use both polyvinyl alcohol and polyvinylphosphonic acid as the hydrophilic polymers in Mougin's composition with a reasonable expectation of obtaining a film exhibiting satisfactory mechanical and cosmetic properties which do not change in the envisaged cosmetic application. Mougin also teaches (col.5, lines 36-41) that those hydrophilic polymers are present in the composition in the preferred amount of 10-30% by weight. Assuming one uses the polyvinyl alcohol and polyvinylphosphonic acid in equal amount, this will give 5-15% by weight for each polymer. Mougin also teaches amine salts and ammonium salts as some of examples of the surfactant to be used in his composition discussed above (see col.5, lines 52-61). Thus, Mougin's teaching renders obvious present inventions of claims 7-12 (it is the Examiner's position that Mougin's composition comprising polyvinylphosphonic acid and

polyvinyl alcohol would inherently be capable of being used as an organic anti-reflective coating composition).

***Allowable Subject Matter***

6. Claims 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the cited prior arts teaches or suggests present method of forming a pattern as claimed in present claim 13.
7. Claims 1-6 are allowed. None of the cited prior arts teaches or suggests present method of forming a pattern as claimed in present claim 1.

***Response to Arguments***

8. Applicants argue that there is no motivation in the applied references to select a combination of the polymers recited in the claims and thus that the applied references fail to render claims 7-12 obvious. Applicants also argue that nothing in the references discloses the use of the polymers as an anti-reflective coating composition.

However, as discussed above, Mitchell'137 teaches in his claim 1 a multicomponent superabsorbent particle comprising at least one basic water-absorbing resin in contact with at least one acidic water-absorbing resin, and as one the examples for the acidic water-absorbing resin, Mitchell clearly discloses (in his claim 19) a *polyvinylphosphonic acid*. Mitchell also teaches multicomponent superabsorbent particles having microdomains of the acidic resin and the basic resin dispersed in a continuous phase of a matrix resin, and as one of examples for the matrix resin, Mitchell clearly discloses *polyvinyl alcohol*. *Since there were not that many examples to choose*

*from (either for the acidic water-absorbing resin or the matrix resin), it is still the Examiner's position that it would have been obvious to one skilled in the art to form multicomponent superabsorbent particles having microdomains of polyvinylphosphonic acid (as the acidic water-absorbing resin) and the basic water-absorbing resin dispersed in a continuous phase of polyvinyl alcohol (as a matrix resin) with a reasonable expectation of obtaining superabsorbent particles that exhibit exceptional water absorption.*

Also, as discussed above, in claim 2, Mougins clearly teaches that his coating composition can contain one or more hydrophilic polymer. Since there are not that many examples to choose from (for the hydrophilic polymer), it is still the Examiner's position that it would have been obvious to one skilled in the art to use both polyvinyl alcohol and polyvinylphosphonic acid as the hydrophilic polymers in Mougins composition *with a reasonable expectation of obtaining a film exhibiting satisfactory mechanical and cosmetic properties which do not change in the envisaged cosmetic application. Since both of Mitchell and Mougins teaches (or renders obvious) present combination of those polymers of claim 7, it is the Examiner's position that Mitchell's composition comprising polyvinylphosphonic acid and polyvinyl alcohol and Mougins's composition comprising polyvinylphosphonic acid and polyvinyl alcohol would inherently be capable of being used as an organic anti-reflective coating composition in the absence of applicants' showing otherwise.*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333.

The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. J. L.*  
S. Lee  
December 23, 2005

*Sin J. Lee*  
**SIN LEE**  
**PRIMARY EXAMINER**